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Lori Wright

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UNHCEMS

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New Web-based System Is Available To Universities Nationwide

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DURHAM, N.H. – As the United States enters a summer of heightened concern regarding terrorist attacks, the University of New Hampshire announces it has expanded its comprehensive online system that tracks hazardous materials to include radioactive materials, such as substances that could be used to manufacture a dirty bomb.

The UNH Chemical Environmental Management System (UNHCEMS) was developed by the UNH Research Computing Center (RCC) in consultation with the UNH Office of Environmental Health and Safety. The Web-based system allows public and private research institutions to manage hazardous chemicals and radioactive materials stored at multiple locations on their campuses.

Radioactive materials are common in medicine and research, according to Brad Manning, director of UNH Environmental Health and Safety. UNHCEMS already tracks thousands of chemical and radioactive materials, and UNH is working to expand the system to track biological agents, such as anthrax and the plague.

“From the standpoint of Homeland Security and the U.S. Patriot Act, this systemdramatically increases the ability of universities to track specific radioactive materials. For example, if we need to determine if we have a particular hazard on campus, we can query the system and find out within a minute if that substance is on campus and exactly where it is located,” Manning says.

The system also tracks radioactive decay for materials. Radioactive materials decay, or disintegrate, at different rates. By calculating the radioactive decay of all radioactive materials stored on campuses, UNHCEMS can accurately determine the level of radioactivity of the materials.

“Most universities do not maintain comprehensive, online inventories of their hazardous materials. Most universities simply don’t have that information available or up-to-date. My counterparts at other universities have had to hire people to go out and look in every laboratory – hundreds of laboratories – to find these hazards,” Manning says. “Unlike many universities, we know what our risk factors are.”

A case study of UNHCEMS published by the Environmental Protection Agency was included in

the EPA's best management practices catalog for colleges and universities regarding homeland security. UNHCEMS was developed as part of a settlement agreement with the agency following an EPA inspection at UNH five years ago. At the time, UNH was found to have violated the Resource Conservation and Recovery Act regarding waste disposal in laboratories.

"This online chemical management system holds great potential to help universities and colleges improve tracking and management of chemicals and wastes," says Robert W. Varney, regional administrator of EPA's New England Office. "We've found in our inspections that many colleges are wasting significant amounts of chemicals because they do not have systems in place for accurately recording the identity, quantity and location of materials. This system holds great promise to reverse this problem, resulting in campuses that are safer and better for the environment."

Brown University and the University of Massachusetts at Amherst are using UNHCEMS, and numerous universities and hospitals have expressed interest in the system, according to Manning. In addition, a government delegation from Macedonia recently visited UNH and was presented the system as an option for part of its national emergency response system. Universities and other organizations can easily access the system via the Web, with data and software securely stored at UNH.

Institutions wanting to learn more about UNHCEMS can visit www.cems-info.sr.unh.edu or contact Patrick Messer, associate director of the UNH Research Computing Center, at 603-862-2889.

Editors: Brad Manning, director of UNH Environmental Health and Safety, is available for press inquiries. He can be reached at 603-862-2571.